The Performance of ASM-10 HP Arsenic Selective Media

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Interfering Ions

- **Ordinary Anion Exchange Resin**
  - Sulfate strong interference
  - Phosphate modest interference
  - Silica no interference
  - TDS strong interference
- **ASM-10 Media**
  - Phosphate modest interference
  - Silica modest interference
  - Sulfate no interference
  - TDS very weak interference

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Stability of Various Medias

- **ASM-10 HP Media**
  - Very stable physically
  - Very stable within potable water pH range (5 to 10)
  - Stable at high pH (above 13) and very low pH (to around 2)
  - Somewhat stable in oxidants
- **Granular Medias (Iron, Aluminum and Titanium Medias)**
  - Somewhat stable physically
  - Stable within potable water pH range (5 to 10)
  - Not very stable at very high or very low pH
  - Very stable in oxidants

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Why Choose ASM-10 HP?

- Low Cost
- Can Be Regenerated
- Easily Adapted to Existing Equipment
- Very Good Physical Strength
- Very Good Flow Characteristics
- Very High Capacity
- Very Low Leakage

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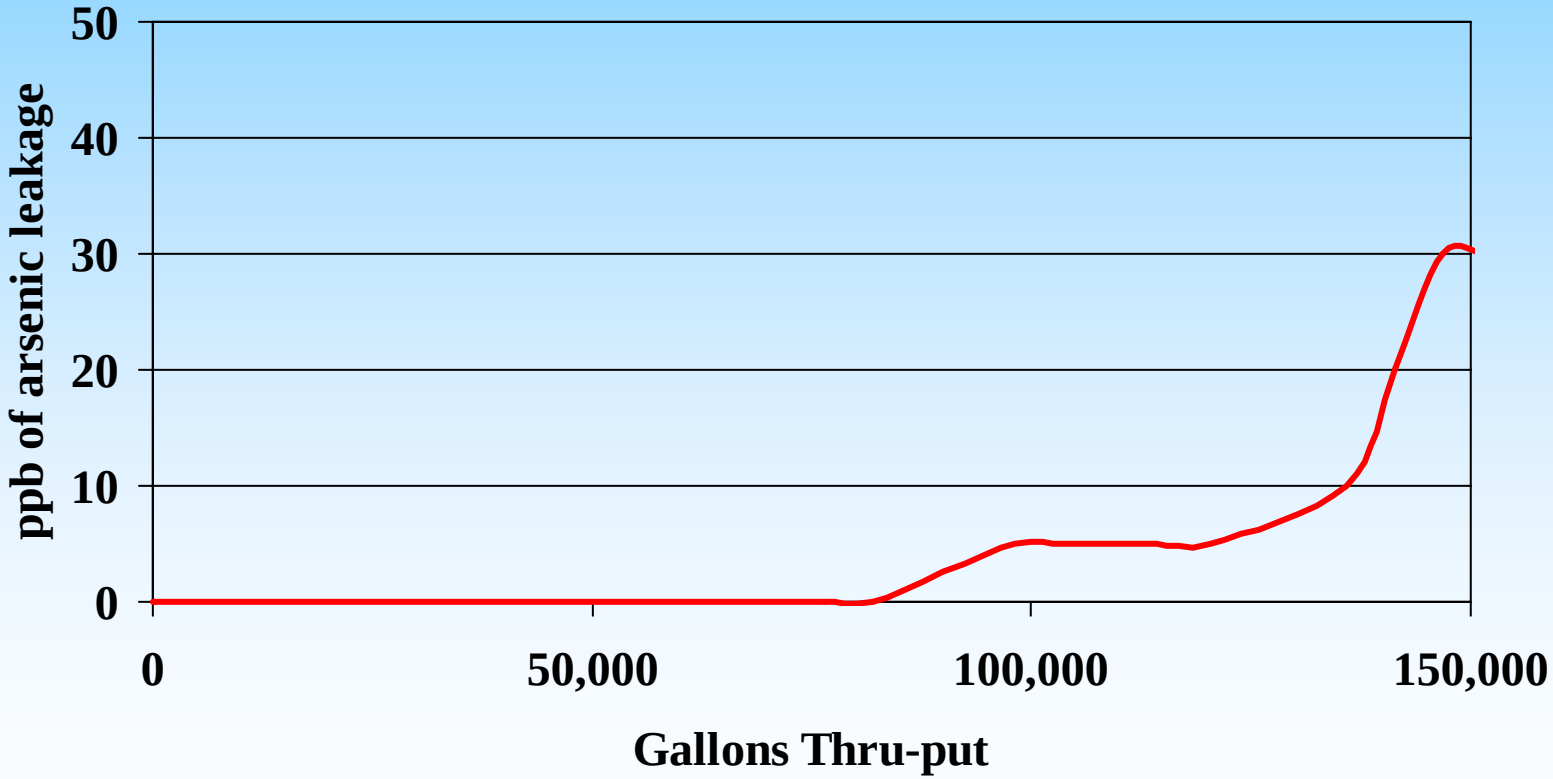
ASM-10 HP

100 ppm SO_4 and 150 ppb As $^{+5}$
flow rate 6 gpm/cu ft



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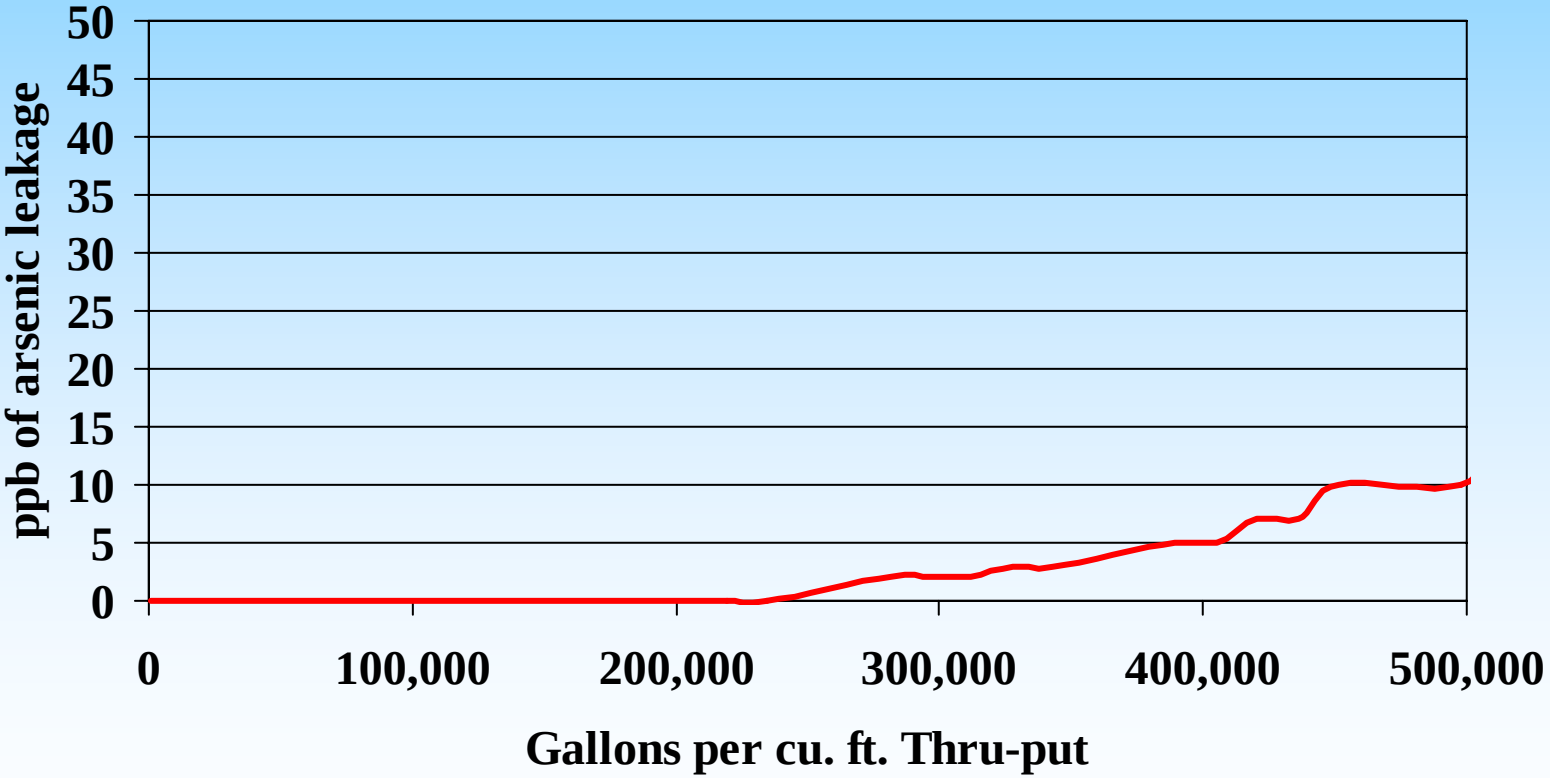
ASM-10 HP

100 ppm SO_4 and 50 ppb As $^{+5}$
flow rate 6 gpm/cu ft



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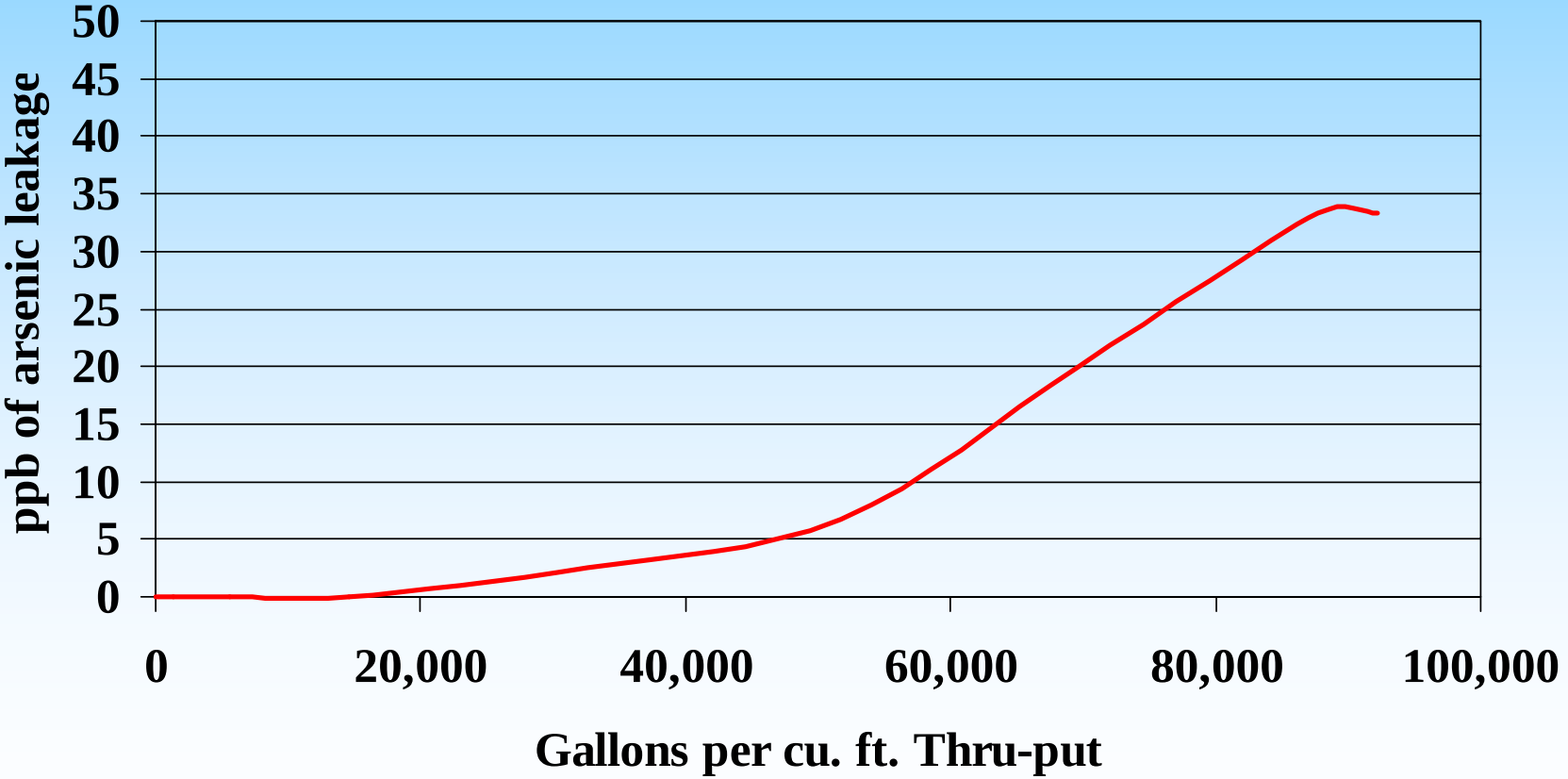
ASM-10 HP

100 ppm SO_4 and 50 ppb As $^{+3}$
flow rate 6 gpm/cu ft



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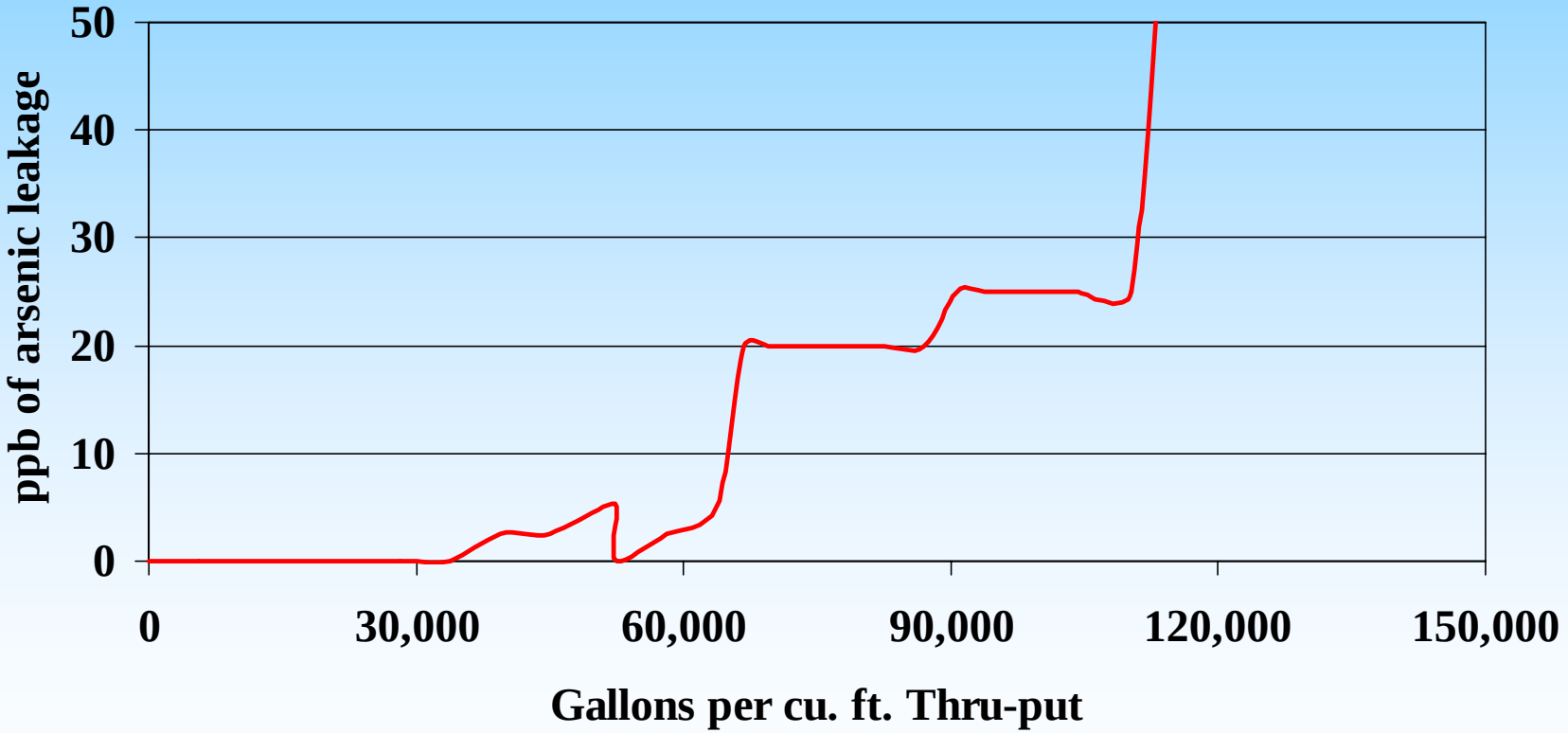
ASM-10 HP

100 ppm SO_4 2 ppm PO_4 and 125 ppb As $^{+5}$
flow rate 6 gpm/cu ft



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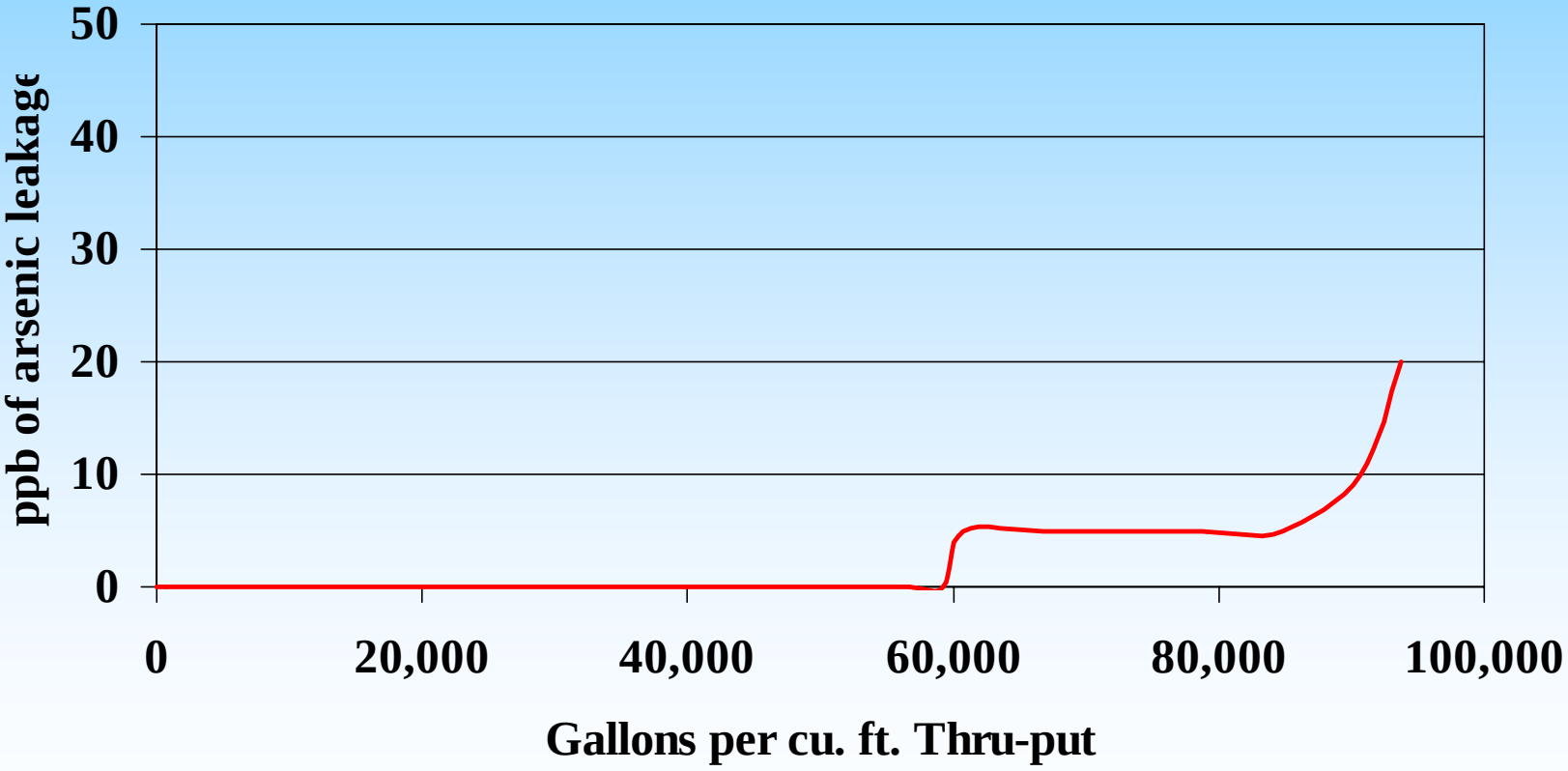
ASM-10 HP

100 ppm SO_4 10 ppm of SiO_2 and 125 ppb As $^{+5}$
flow rate 6 gpm/cu ft



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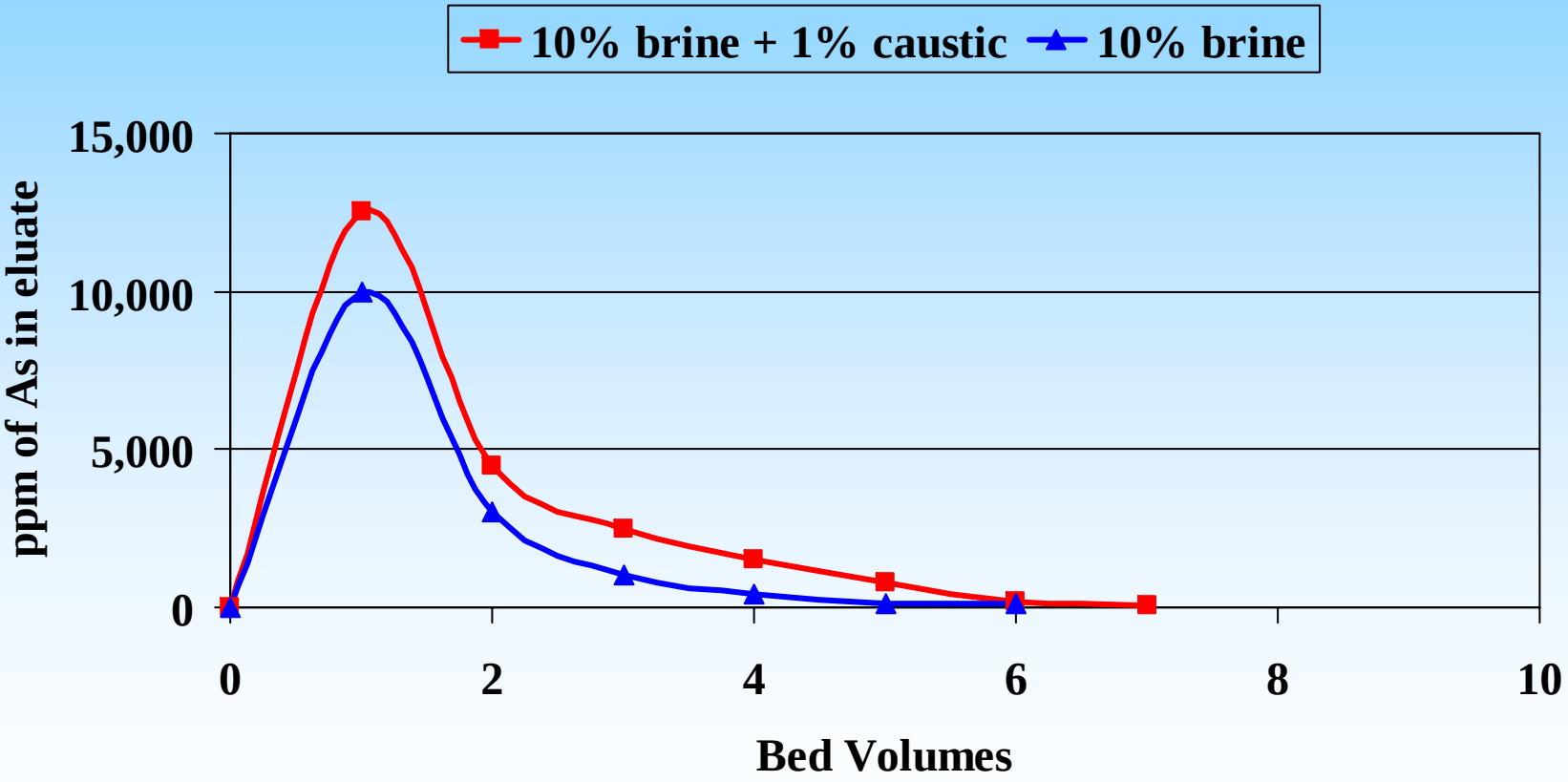
Arsenic Elution From ASM-10 HP

(resin loaded with approx 30 gram/liter as As)



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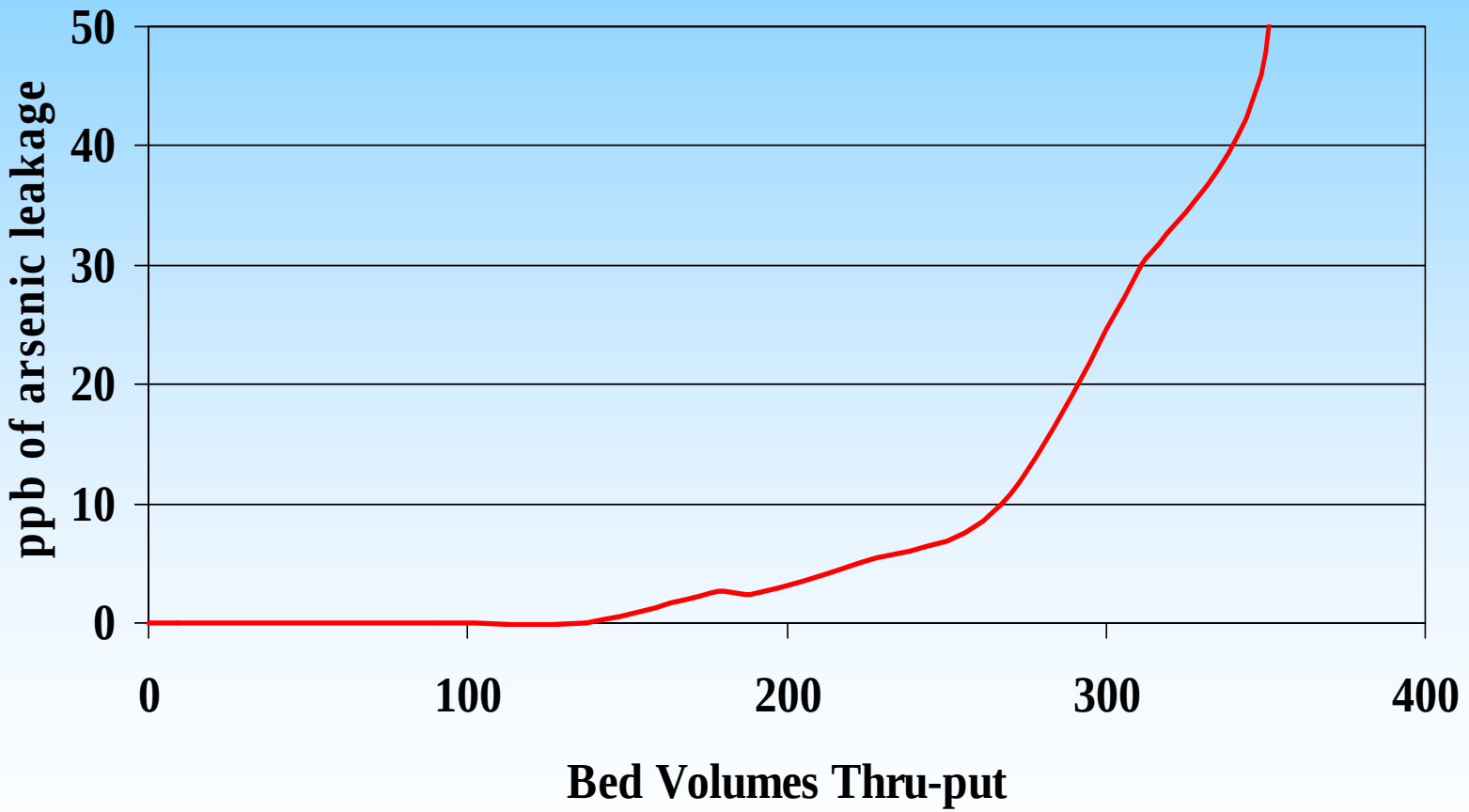
ASM-10 HP

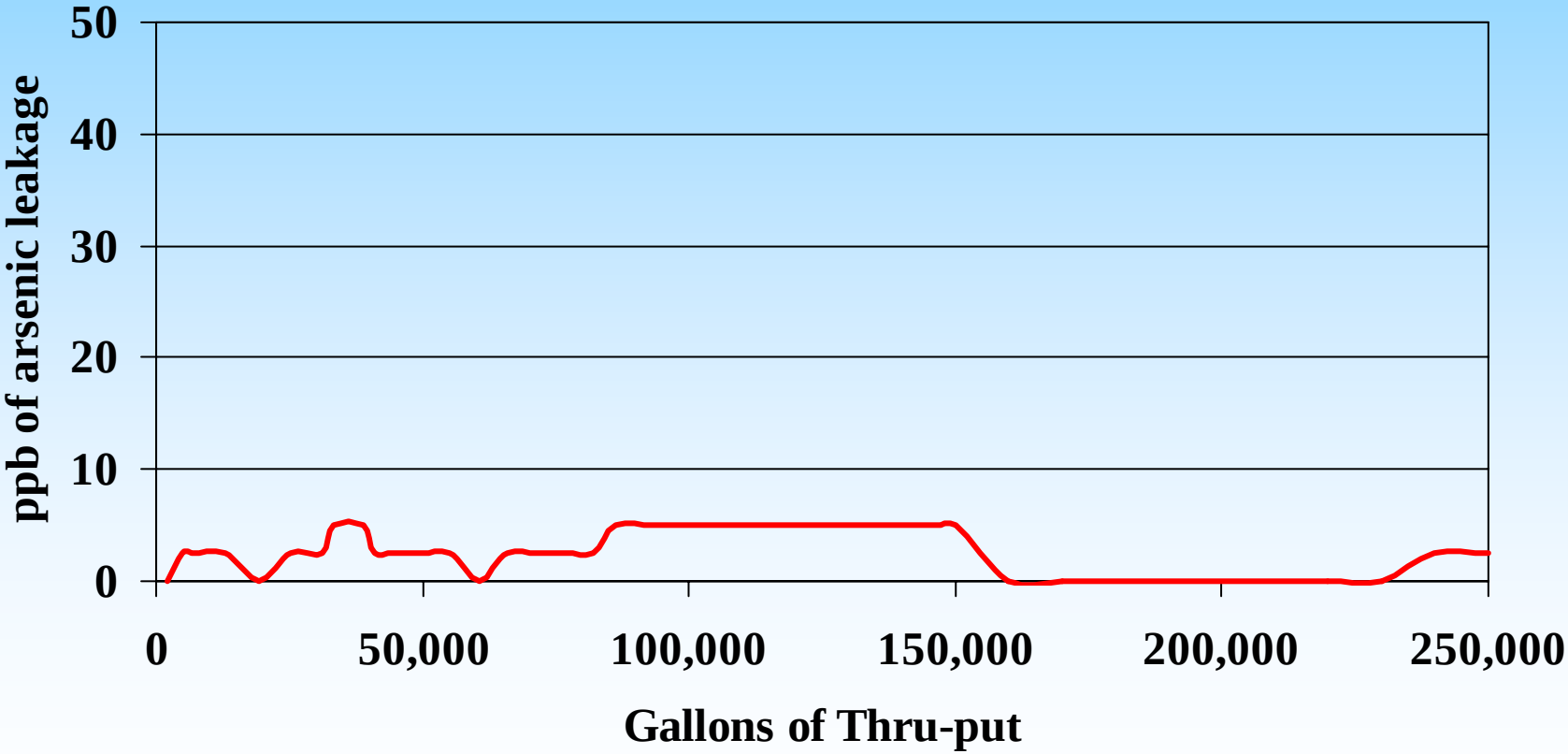
100 ppm SO_4 and 125,000 ppb As $^{+5}$
flow rate 2 gpm/cu ft



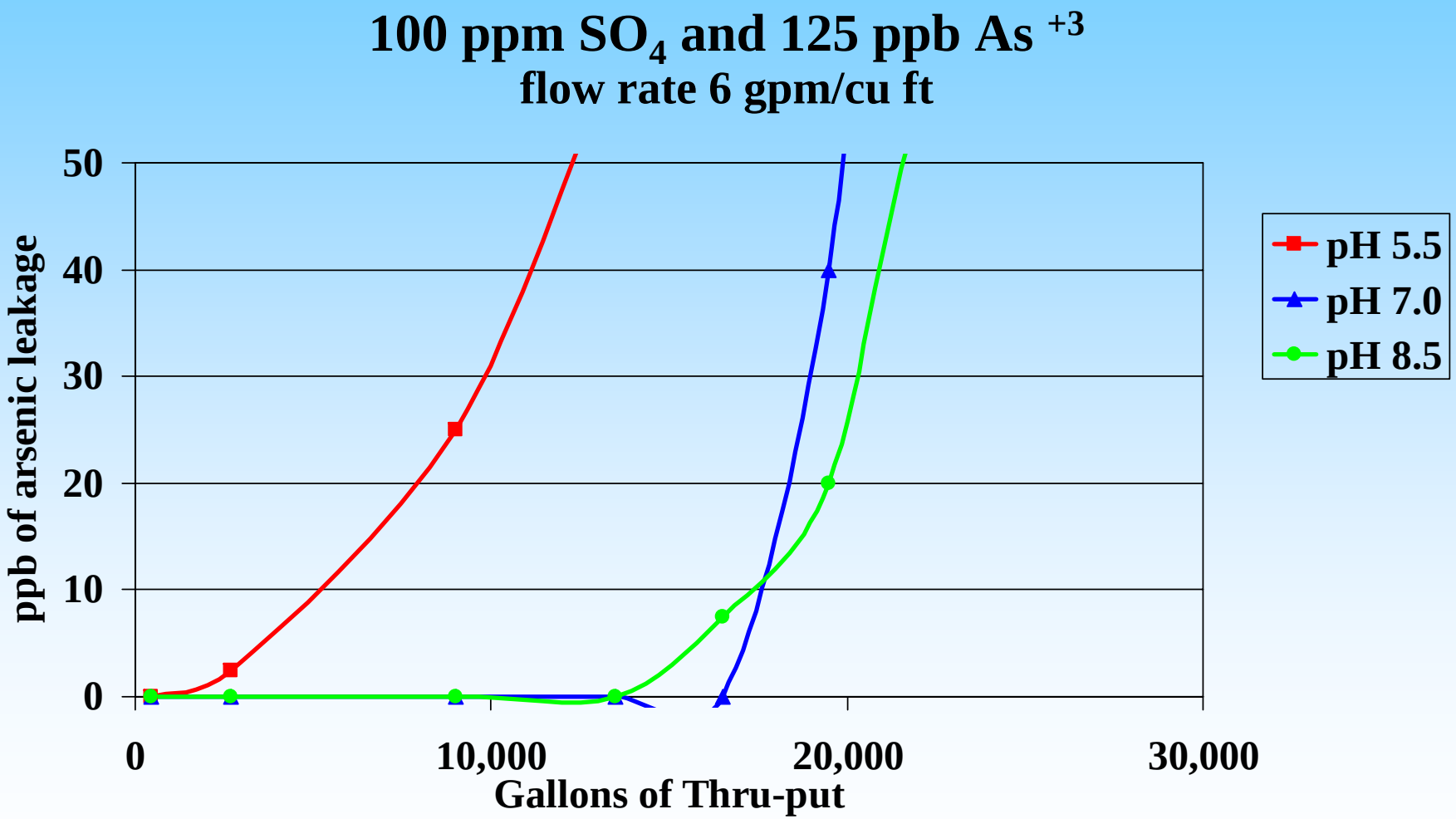
RESINTECH

ASM-10 HP

1000 ppm SO_4 and 125 ppb As $^{+5}$
flow rate 6 gpm/cu ft



ASM-10 HP



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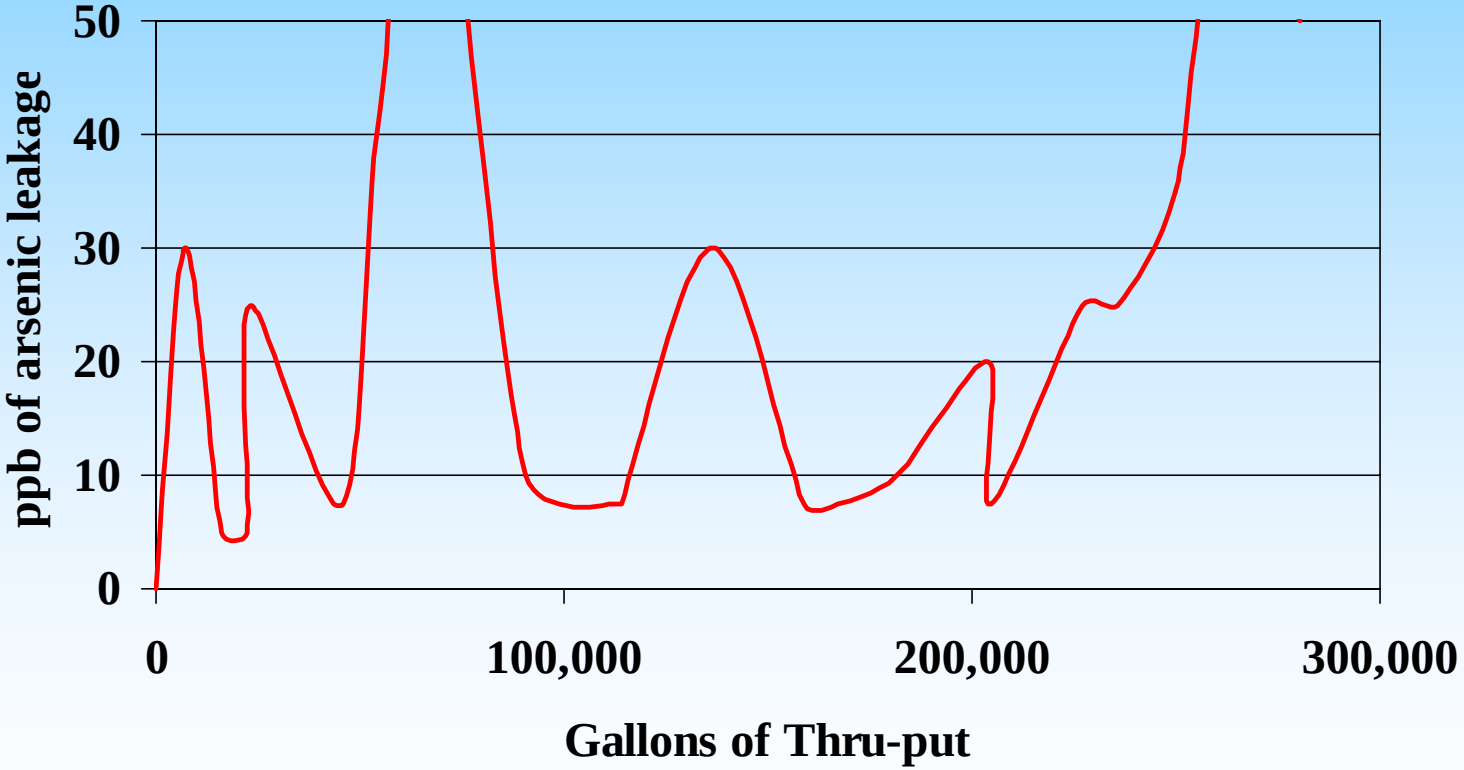
ASM-10 HP

100 ppm SO_4 and 125 ppb As $^{+5}$
flow rate 15 gpm/cu ft



Note: The sawtooth leakage is the related to flow stoppages and restarts

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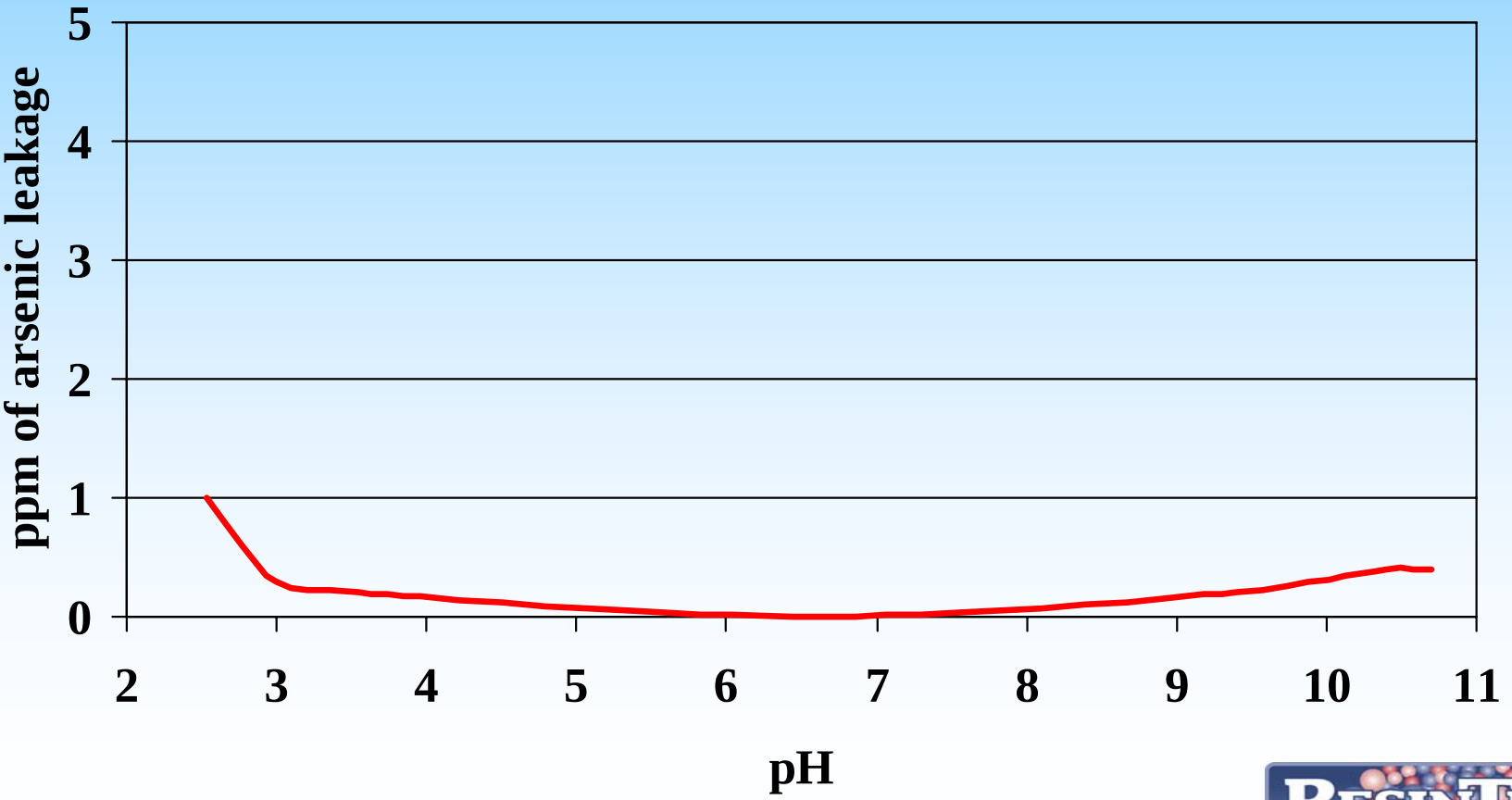
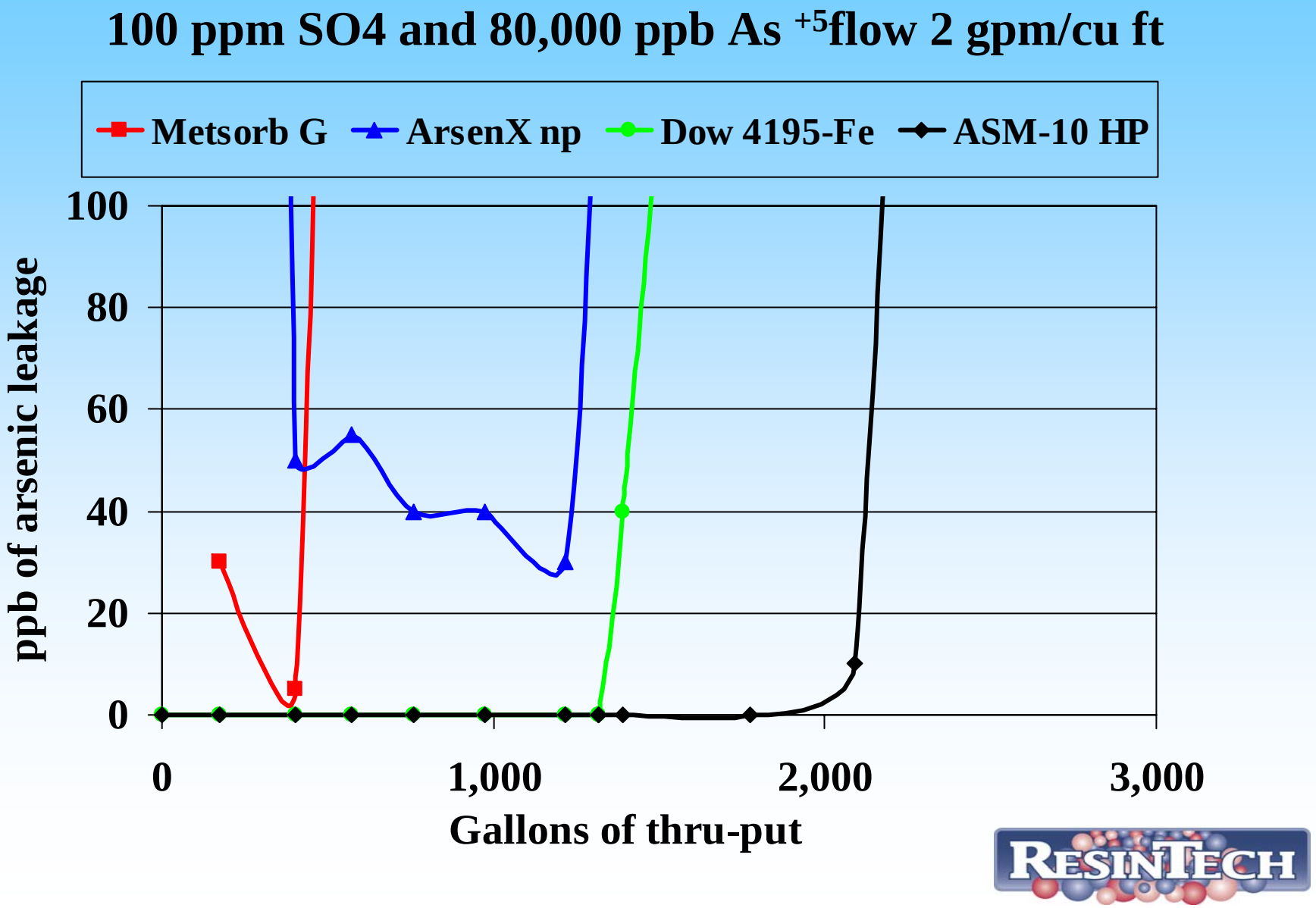
Stability of Exhausted ASM-10 HP

ASM-10 HP loaded with 30 gram/liter of As

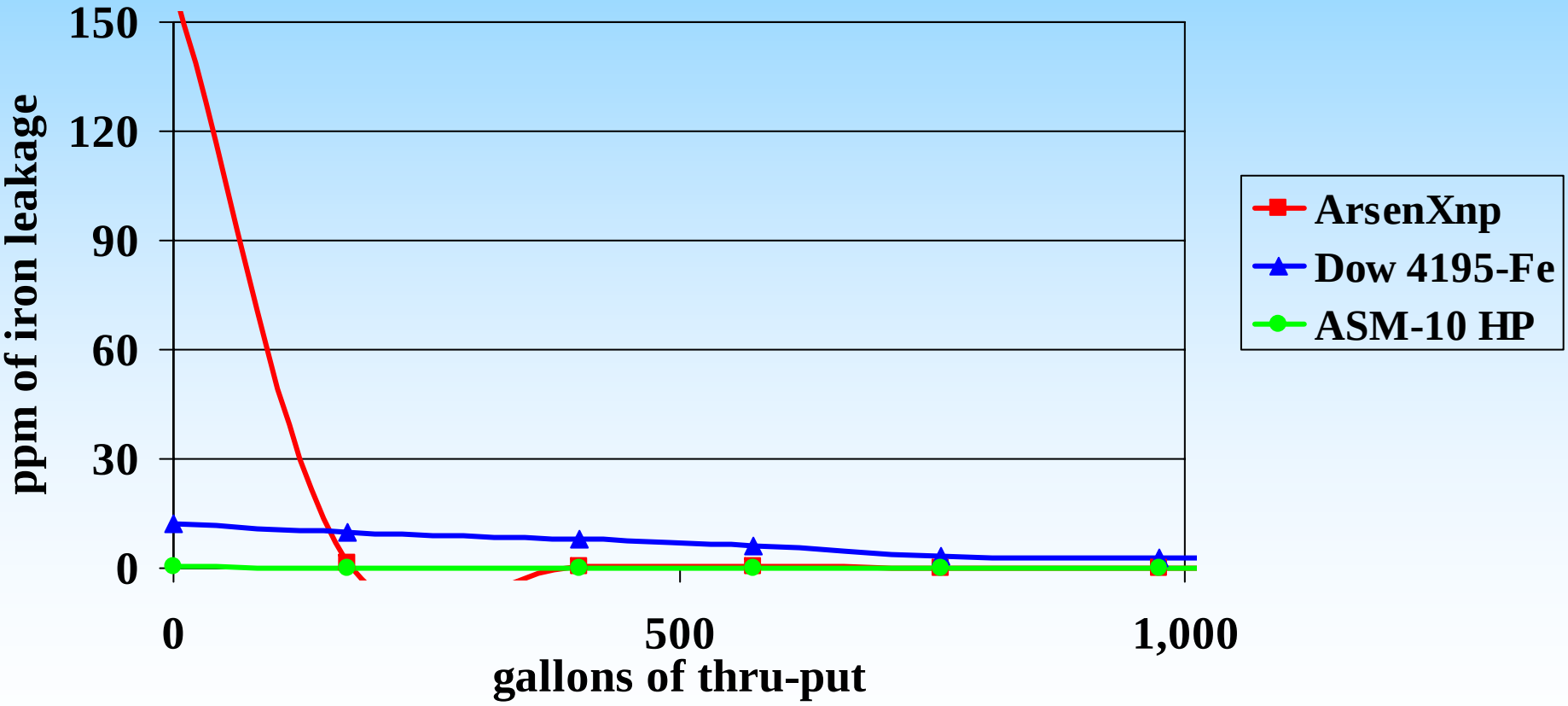


Comparison of Various Medias



Initial Iron Leakage from Various Medias

at pH of 7.0 and approx 100 ppm TDS



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As Adsorption by Various Medias

- **Ordinary Anion Exchange Resin**
  - 30 grams of As per pound of resin (no sulfate)
  - 2.3 grams of As per pound of resin (low sulfate)
  - 0.02 grams of As per pound of resin (high sulfate)

- **ASM-10 HP**
  - 2 to 4 grams As per pound of media at 100 ppb inlet (100 ppm sulfate)
  - 15 to 30 grams As per pound of media at 100,000 ppb inlet (100 ppm sulfate)

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As Adsorption by Various Medias *(cont'd)*

- **Activated Alumina**
  - 0.6 grams of As per pound of Alumina at pH 5.5 (100 ppm sulfate)
  - 0.3 grams of As per pound of Alumina at pH 6.0 (100 ppm sulfate)
- **Titanium Oxide (Metsorb G)**
  - 2 to 4 grams of As per pound of media at 100 ppb inlet (100 ppm sulfate)
  - 7 to 15 grams of As per pound of media at 100,000 ppb inlet (100 ppm sulfate)
- **Ferric "Oxy-hydroxide"**
  - 1 to 2 grams of As per pound of media (100 ppm sulfate)

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